

Test Development
and *Psychometric Services*



Test Development Services

Fair, valid, reliable, legally defensible: the definition of a successful high-stakes exam. Ensuring that level of excellence depends on many variables including the quality and thoroughness of the items and test development processes used. More importantly, it depends on the experience and expertise of content developers and psychometricians who create, test and validate that assessment.

Pearson VUE's highly-skilled content development and psychometric services teams are the proven authority in helping exam owners create the content used to award their most valued asset - a credential.

Content development team

To make certain that test content is valid and defensible, Pearson VUE's content development team is unrivalled in the creation and maintenance of large-scale item banks.

The team work with client-designated subject matter experts (SMEs) to build robust item banks that focus on the knowledge-base that distinguishes a competent test-taker from one who is not qualified. Our expertise comprises all phases of content development for a variety of test types including admissions, certification and licensure.

Psychometric services team

Pearson VUE's psychometric services team is composed of highly qualified professionals who have earned advanced degrees in the science of measurement. Our psychometricians are available to assist clients at every stage of the test development process – test design, exam and item analysis, test construction, equating and scaling, and setting the standard (pass point).



Services offered

Programme evaluation

Reviewing the programme with key stakeholders to fully understand the client's goals and requirements is step one. During this requirements-gathering phase, our content developers and psychometricians conduct a full audit of existing test materials and other relevant documentation. Drawing on more than 200 years of combined experience, our team members offer sophisticated advice to guide and assist in the development of a high-stakes test. The outcome of the programme evaluation is a summary report that includes our best-practice recommendations.

Job task analysis

Determining what to assess through a systematic process is critical to the validity of a test. Our content developers and psychometricians are experts at employing evidence-based methodologies to systematically determine the knowledge, skills and abilities most relevant to assess. The outcome from the analysis is the creation of a test blueprint; a detailed plan of what will be tested.

Test design

Our experience in meeting the diverse needs of global clients from all sectors of industry means we excel in the critical area of test design. Pearson VUE's test development professionals recommend test administration methods and item types which will ensure that fair and consistent standards are applied in assessing test-takers' knowledge, skills and abilities in the most appropriate manner.



Standard setting

Pearson VUE's test development professionals are available to lead or mediate standard-setting sessions to confirm that test-takers who pass the exam have achieved a justifiable and defensible standard. Our psychometricians are experienced in the major standard-setting methods used in testing and are equally adept at leading in-person and virtual standard-setting sessions.

Item development

Good tests require good content. The Pearson VUE content development team is the expert in developing content worldwide for both traditional types of items and innovative formats. For maximum flexibility, we offer two basic models of item development services:

Workshop facilitation model

In this model, the client supplies the SMEs who will be responsible for writing and reviewing test items. Pearson VUE's content development team provide item writing training and workshop facilitation in both virtual and in-person environments.

We recognise that writing good test questions is both art and science. Armed with years of developing item-writing best practices, we can train our clients' subject matter experts to produce high-quality test questions that assess relevant knowledge and skills effectively and efficiently.

Contracted services model

This model is designed for clients who wish to delegate the test development process. Pearson VUE takes an active role in recruiting and managing item writers. The test owner provides high-level oversight through mutually-agreed upon key performance indicators (KPIs).



Item bank maintenance

The process of developing high-quality test items doesn't end with item writing. Pearson VUE's procedures and systems support the entire end-to-end item development process, including maintaining item banks and providing workflow management and version control to track items through all the developmental phases. We can recommend pretesting strategies to ensure that items are fit-for-purpose before applying them as items that count toward test-takers' scores. We collect statistical data that are stored with the items in the item bank. Items that exhibit desired statistical properties will be used as scored items in subsequent tests.

Editorial item review

Pearson VUE's content development team includes individuals who are experts in reviewing items for grammar, clarity, style and compliance with testing industry standards. The review process also includes an appraisal of the items for cultural sensitivity and for potential item bias which may advantage or disadvantage specific groups of test-takers.

Test construction

To ensure the validity of the exam results and that test-takers are not disadvantaged by the version of the test they take, Pearson VUE psychometricians and content developers build test forms that match the content outline and psychometric specifications. The test construction process includes the building of initial drafts of test forms or pools by our psychometricians according to statistical and content guidelines. Our experts then review the test forms and may facilitate a workshop with the client's subject matter experts to finalise the test forms. Pearson VUE psychometricians perform a statistical procedure, called equating, to adjust the scoring of alternative test forms so that scores are comparable across the different versions of the test.

Psychometric analysis

Through the use of two major methodologies, Classical Test Theory and Item Response Theory, Pearson VUE psychometricians can conduct rigorous analysis to monitor and evaluate the performance of tests and individual items. We provide the monitoring results to clients for use in improving the measurement quality of the tests.

Classical Test Theory

Classical Test Theory (CTT) is the traditional method of describing how scores behave on tests. CTT makes few assumptions about candidates or items and seeks to describe variation in observed test scores. Using CTT, item key and option statistics are generated which describe the reliability of the test, the difficulty of the items and how well they discriminate high-performing and poor-performing test takers regarding the content being assessed.

Item Response Theory

Item Response Theory (IRT) models are often employed for high-stakes testing. IRT is based on the concept that the probability of a correct response is a function of the test taker's ability and certain item parameters. The cornerstone of the application of IRT is a calibrated item bank – items whose parameters are known through previous administration of the items to a sufficient number of test takers. Pearson VUE psychometricians are experts in developing calibrated item banks and applying IRT for psychometric analysis.



Technical reporting

Pearson VUE can provide thorough documentation of the methodology used during the development, maintenance and review of our clients' exams. Our psychometricians write and present technical reports that fully document the statistical methods used and the information and outcomes provided by the statistical analysis. Complete technical reporting ensures our clients have the information they need to be confident their tests comply with best practice standards and are legally defensible.

When tests are used to make important decisions about a candidate's future, it is imperative that the test be professionally developed, psychometrically sound and fair. Pearson VUE's Test Development Services provide our clients with reassurance that their tests meet the mark.

*For further information, contact a
Pearson VUE Account Manager.*

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